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Bachelors Degree programme
Nursing degree
Thesis, 2023

NURSES HANDOVER AND CONTINUITY OF PATIENT CARE IN HOSPITAL SETTING

A literature review

Abstract

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Nurses handover and continuity of patient care in hospital setting
43 pages and 1 appendix
Spring 2023
Diaconia University of Applied Sciences
Bachelor´s Degree Program in Health Care
Nursing

Nurses all over the world begin and end their workday with a nurse's handover. Nurses' handover is a vital tool which is often prone to errors such as inaccurate information transfer, poor documentation and miscommunication which could lead to poor continuity of care and thereby pose risk to patient safety.

The purpose of this study was to explore factors that can influence nurses' handover and its impact on the continuity of patient care and patient safety in hospital settings. The objective of this study is to investigate the different forms and handover tools used by nurses during handover in the hospital settings and to understand barriers and challenges to an effective handover and how it can affect the continuity of care. The aim is also to focus on the importance of handover in nursing and how to improve the handover process.

The research method used for this study was a literature review. Data for the research was collected from CINAHL, Science direct and ProQuest health research premium collection. Selection of articles was based on a predetermined inclusion and exclusion criteria. Selected articles were analysed and synthesized by thematic analysis.

Full texts of selected articles were thoroughly examined, and data obtained were categorized to create themes and sub-themes. The study results identified four main themes after the data analysis of the selected articles: institutional system and guidelines, quality of handover, barriers to handover process, and patient safety.

The findings indicated that the use of structured and standardized handover tools, handoff communications, with the exclusions of barriers and risk factors to patient safety are key factors for a successful handover.

It can be concluded that nurses' handover has been demonstrated as an important component of client care and continuity of care in hospital settings.

Key Words:
continuity of patient care, intershift reports, nurse handoff, nurse handover, patient safety

Acronyms

ACSQHC: Australian Council of Safety and Quality in Health Care
FINCC: Finnish Classification Care system
IS0BAR: Identify, Situation, Observation, Assessment, Recommendation
ISBAR: Identify, Situation, Background, Assessment, Recommendation
ISBARQ: Identify, Situation, Assessment, Recommendation, Question
NICU: Neonatal Intensive Care Unit.
NDS: Nursing Documentation Systems
JC: Joint Commission
JCAHO: Joint Commission on Accreditation of Health Care Organization.
NEWS: National Early Warning Score
OR: Observation room
PICU: Paediatric Intensive Care Unit
SAFE: Significant comorbidity, at risk for, Follow up and Epidural
SBAR: Situation, Background, Assessment, Recommendation
TLs: Team lead nurse

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1 INTRODUCTION

In a nurse handoff, responsibility and accountability are transferred at the beginning and end of every shift to promote continuity of care between off going nurses and incoming nurses (Boersma et al., 2022). Communication failures during handover are now recognized internationally as a major cause of critical incidents and are involved in a significant proportion of patient complaints (Eggins et al., 2016).

During the sentinel alert event, the joint commission (2017) noted that communication gaps continue to exist during hand-off processes, which poses a potential risk to patient safety. This problem is exacerbated by the high frequency of handovers in health care, especially in hospitals. Each day, a typical teaching hospital undergoes over 4,000 handoffs, which are sometimes carried out casually and not structured to ensure continuity of care.

Ineffective handover is one of the most preventable causes of patient harm, and the most important step to ensure the patient's safety. Handovers of patients are an essential part of hospital workflows and processes. As a result, ensuring continuity of care for patients requires transferring professional responsibility and accountability for some or all aspects of their care or for a group of patients to an individual or a professional group either temporarily or permanently (Raeisi et al., 2019).

According to the Australia commission on safety and quality in health care (ACSQHC,2023), structured clinical handover has been proven to reduce communication errors within and between health service organizations, as well as to improve patient safety and care, because critical information is more likely to be accurately transferred and acted upon. When care transitions occur, communication errors are more likely, and information is miscommunicated or lost.

In Finland the structured nursing documentation model provides safer and more comprehensive patient care, supports clinical care, and promotes continuity of care. As a result of the Fincc nursing documentation, nurses have been able to structure the entire patient care process better and have guided the development of patient care. (Kinnunen et al., 2014)

This study is of great significance to working life of nurses in Finland and around the world because a nurses handover is a daily activity in hospital setting and it is often prone to errors such as inaccurate information transfer and miscommunication which could be of harm or pose risk to patient safety. Therefore, nurses need to know the importance of handoffs and understand the barriers and challenges involve in the process to limit risk of harm to patients.

2 NURSES HANDOVER IN HOSPITAL SETTINGS

The background chapter will focus on discussing relevant information about the research topic (nurses handover). An overview of the definition of nurse’s handover and its types, best practices, tools to nurses handover as well as its challenges, nursing handover and communication and nursing handover and patient safety will be discussed below. During this literature the terms nursing handover, handoff, inter-shift reports will be used simultaneously as they have same meaning.

2.1 Defining nurse’s handover

The Joint Commission defined handover/handoff as a transfer and acceptance of responsibility for patient care which is aimed through effective communication. This is the process of exchanging patient-specific information between caregivers or nurses teams to ensure continuity and safety for the patient (Kear, 2016).

The Australian Council for Safety and Quality in Health Care defines clinical handover as the transfer of professional duty and accountability for all or some specific aspects of care for patients or professional groups either temporarily or permanent basis (Tacchini et al., 2020).

A nursing handoff involves the exchange of pertinent patient information between nurses during the transition of patient care. Many clinical settings and studies across the globe use synonyms like handover, sign-out, or shift reports interchangeably (Le et al., 2023).

2.2 Types of nurse’s handover

In healthcare, bedside handover shift report usually involves face-to-face interaction between two or more nurses. Bedside handover is mostly done at the end of shift between the off-going nurses and incoming nurses which takes place at the patient´s bedside (Bressan et al., 2019).

It is characterized with the involvement of patient in their own care process, which may also help to foster care process. It allows patient access to their medical condition and nursing care information (Alrajhi et al., 2013).

A verbal handover is an oral exchange of words between nurses, that is the incoming nurses and outgoing nurses in other to discuss information about patient´s situation during shift (Alrajhi et al., 2013). Verbal handover usually takes place at the office setting, nurses are responsible to exchange the documented information of patients (Smeulers et al., 2014).

The nursing tape handover is a method of recording patient information unto a recording device during work, and then play the recording for the incoming nurses during shift changes, or the incoming nurses may play the recording themselves (Alrajhi et al., 2013). Tape handover is said to benefit the outgoing nurses as it helps save time for handing over to the incoming nurses. Taped handover was used in other to reduce the shift overlap time (Scovell, 2010).

Written handover is said to be a form of documentation in healthcare settings. During a documentation handover, nurses explain the patient´s conditions and their data on a nursing sheet or other specialized documentations (Alrajhi et al., 2013).

Documentation is described as any written or electronically forms of generated information about client or patient status as well as the care and services provided to them (Petkovsek et al., 2015). Many literatures now identify problems with how patient data are being stored. It was ascertained that patient information is not always formally recorded, nurses write patient information on sheet of paper or on their hands. As such, this report sheets are often lost. It was said that the lack of continuity and consistency in information flow between clinicians can be attributed to illegibility and poor quality of written records, which thereby lead to adverse event (Eggins et al., 2016. p.12). In response, most healthcare authorities are considering the use of electronic records for handover.

During an electronic handover, a nurse enters patient information into a computer system where it is saved. The next shift's staff retrieves and reads it (Alrajhi et al., 2013).

2.3 Barriers and challenges to effective handover:

Interruption in handover have been observed, it was said that findings from study of interruptions in nurse´s work has demonstrated serious implications on patient safety. There has been evidence concerning how interruptions during nurse-to-nurse handover has impacted change of shift handover process (Vanderzwan et al., 2023).

Second language nurses have lower linguistic precision with fewer descriptions when compared to native language nurses. However, the findings also explain that documentation by native language nurses may also be incomplete as proven by other studies (Johannesen et al., 2019).

It was established in a study, that “time” is a key factor affecting all types of nurses handover (Watson et al., 2014). It was found in the study that nurses understand the importance of handover, but time has been a great challenge to this effect.

The process of handover is said to be impacted by institutional factors which may involve the design of work schedule, information technology services, and the organizational structures. Organizational factors such as lack of protected hand-over time and excessive patient workload negatively affect the handover process (Randell et al., 2011).

2.4 Effective tools for handover

Since handover have been identified as a basic component of communication. It was said that many healthcare institutions and hospitals has initiated quality tools and models in other to mitigate these challenges of handover. An effective handoff tool must be comprehensive and characterized with clear and concise information about the patient (Boersma et al., 2022).

SBAR is a tool which stands for “situation, background, assessment and recommendation”. It is said that SBAR is a proven tool that strengthen and improve communications among healthcare professionals which enables changes in the patient (Gungor et al., 2022). The ISBAR, ISoBAR and ISBARQ are synonyms which will be used interchangeably within texts in this study.

The design of a web-based nursing handover tool is to improve nursing communication standardization. The author further states that the major useful requirement of the tool includes avoidance of repetitions and information burden (Abraham et al., 2012).

HAND-IT tool is to simplify handoff communication, to help coordinate information seeking, and to organize work in advance of handoffs. The design of HAND-IT involves requirements, gathering, design, tool development and evaluation. This tool helps in promoting and ensuring continuity of patient care that emphasizes the importance of capturing an uninterrupted succession of patient event to meet their care needs (Abraham et al., 2012).

An electronic health record (EHR) in Finland is composed of nursing documentation systems (NDS). The system is designed to support multi-professional patient care. A national nursing model has been developed in based on nursing needs and nursing documentation is structured using the national nursing core data set (NMDS) and Finnish Care Classification (FinCC) (Kuusisto et al., 2012).

The use of EMR handover tool allows for an improvement in shared intraoperative information such as blood product given, antibiotic schedule and airway management (Bell et al., 2022). It was said that this tool was effective during a study in ICU department. The tool was demonstrated to be transferable and an effective long-term method to promote the validity of information exchanged during handover. By using electronic tools, data definitions can be standardized, information can be uniformly communicated, ambiguities can be minimized, and process efficiency can be increased. All these are possible benefits of electronic tools (Eggins et al., 2016 p.13).

2.5 Nursing handover and communication

During the shift handover, communication is the best basic tool. This process can take different forms, but the most common are spoken and face-to-face verbal conversations. As such, these forms can be insufficient when used exclusively, which thereby compromised the patient safety (Silva et al., 2016). Communication during handover plays a vital role in ensuring continuity of care for patients thus effective nursing handover is an important aspect of rendering good-quality patient care. Handovers ensures consistent continuity of patient care by providing the incoming nurses with the necessary information needed for the patient(s) care in a safe manner (Boyd, 2014, p.29).

A significant proportion of patient complaints are related to communication breakdowns during handovers, now recognized internationally as one of the leading causes of critical incidents (Eggins et al., 2016, p.6). Also, the joint commission (2017) during the sentinel alert event mentions that patient safety risk will increase if breakdown in communication continue to exist during handover process. It was further said that this problem of breakdown worsens by high frequency of handovers in health care, mostly in hospitals settings. It was evaluated that a typical teaching hospital may experience more than 4,000 hand-offs daily. Sometimes the hand-offs are done too informally when they should be structured and organized to ensure continuity of care.

During handover a lot of barriers to communication can pose problems to continuity of care. Some issues involved physical hindrance such as noise, interruptions, and lack of dedicated or sufficient space during clinical handover can contribute to communication problems, such as clinicians not being able to hear each other during handover, also clinicians may not be able to complete the handover due to interruptions (Eggins et al., 2016, p.8). Also, most times during documentation, patient information is not always formally recorded, nurses write patient information on sheet of paper or on their hands. As such, this report sheets are often found missing. it was said that the lack of continuity and consistency in information flow between clinicians can be attributed to illegibility and poor quality of written records, which thereby lead to adverse event (Eggins et al., 2016, p.12).

Teamwork and communication between healthcare teams are key factor to improve quality of care and patient safety. A significant number of adverse events occur because of communication failures within the treatment teams, it was reported that about 70 percent of these errors are caused by human error in non-technical skills such as communication, management, and decision-making. Lack of organizational structure and standardization can sometimes be attributed to communication failures (Moi et al., 2019), and the effect of communication errors can cause damages to patients, breach the continuity of the treatment and the quality of care (Silva et al., 2016).

The failure to hand over relevant information, such as medications and test results, is one of the problems during handover. There was a lack of structure, and relevance to handover information, excessive reliance on memory without reference to written documentation, and failure-prone communication processes, such as clinicians lacking face-to-face discussions and doing handovers away from patients and families (Eggins et al., 2016, p.101).

2.6 Nursing handover and patient safety

Handover has been recognized internationally as a high-risk area for patient safety, and the call for interventions to improve the handover process has increased. These has led Organisations such as the World Health Organization's recognised handover as top five priorities, and it is furthermore included as a patient safety parameter by the Joint Commission on Accreditation of Healthcare and the Australian Medical Association (Raeisi et al., 2019).

At every handover, irrespective of the context or who is involved, there is a possibility of miscommunication or gaps or errors in information transferred, and with each of these errors or misunderstandings there are potential risks involve to patient safety. As such, international evidence confirms that handover is a high-risk moment in the patient's hospital journey (Eggins et al., 2016, p.7).

There is potential for patient harm from the minor to the severe when the receiver gets information that is inaccurate, incomplete, not timely, misinterpreted, or otherwise not what is needed. When hand-off communication fails, many factors are involved, such as health care provider training and expectations, language barriers, cultural or ethnic considerations, and inadequate, incomplete, or non-existent documentation (Joint commission, 2017). Ineffective communication during handover 'is the most common cause of catastrophic or sentinel events in hospitals', leading to communication at handover being identified as a key safety and quality issue currently being discussed by health service regulators and providers. Effective handover is therefore seen as an essential factor to the quality and safety of care (Piper et al., 2018).

2. KINGS GOAL ATTAINMENT THEORY

In this study the Imogene kings goal attainment theory will be used as a base of the theoretical framework. The king's goal attainment provides a framework for the study, nurses handover and continuity of patients care. In research projects, theoretical frameworks provide a blueprint for identifying the problem. Also, it shows how the research fits into existing knowledge. It lays the foundation for the research question, literature review, methodology, and analysis. (Heale and Noble, 2019). Theory of Goal Attainment is a theory of nursing that focuses on processes and outcomes. Setting mutual goals is the critical, independent variable. In the theory outcomes can be attained through goals. By identifying the goals as client behaviours, nursing care can be measured by how effectively it meets the client's needs (Sieloff, 1991, p. 27).

The essence of the goal attainment theory is that nurses and patients work together to define and achieve goals that they set together within the framework of King's conceptual framework (Snowden et al., 2010). Together, the nurse and patient perceive, judge, and act, and react to and interact with each other. Once a goal has been set after this process of communication and perception, a transaction has occurred. An interaction between a nurse and a client result in goal attainment (Sieloff, 1991, p. 22).

According to the king's conceptual framework, there are three interacting systems: the personal, the interpersonal, and the social. Nurses and patients interact towards a common goal. Depending on King's transaction process model, the endpoint of this interaction, which occurs over time, is a transaction, and the individual's goal is achieved as a result of this collaboration. (Snowden et al., 2010). King (2001) describes how the transaction process provides theoretical knowledge that is used by nurses to implement the nursing process and evaluate nursing care. For the transaction process, four concepts were selected from the theory of goal attainment, perception, communication, interaction, and transaction.

2.1 The personal system.

King conceptualized a personal system as a way for nurses to better understand individuals. This system emphasizes body image, growth and development, perception, self-space, and time. This system enables nurses to create holistic care plans for each individual based on their specific needs and goals. King's personal system offers nurses a comprehensive approach to understanding and caring for individual patients (Sieloff, 1991, pp. 6-7). This context goes into practice with the nurse obtaining health information about the client during handover to be able to use it for continuity of care and thus carrying out preventive care and care of the ill. In relation to nurses as individuals during the handover process, perceives information about clients through a structured tool, for example ISBAR from where the nurse can track patient information during the period of care. If the information is perceived positively then the goal of maintaining the health of the client is achieved.

2.2 Interpersonal system

In this system, the focus is on a group of individuals, such as a dyad, a triad, or even a small or large group of individuals. An interpersonal system is characterized by communication, interaction, stress, and transactions. In accordance with King, the inter-personal system is where the nursing process takes place, and it entails action, reaction, interaction, and transaction between the nurse and the health client. During communication, both verbal and nonverbal exchanges take place. Both oral and written communication can take place in verbal exchanges (Sieloff 1991, p. 7,11). The interpretation of communication depends upon the situation in which it occurs. Once communication occurs, it cannot be redrawn. Communication involves the perception of both a sender and receiver and through communication, transactions are being made between both individuals. As Sieloff mentions, there are many factors that can influence patterns of communication between individuals, situations in which individuals are communicating, roles, expectations, and barriers to communication (Sieloff 1991, pp. 11-12).

The provision of nursing care depends on information; communicating facilitates this process because it "establishes a mutuality between care givers and recipients". Nurses have as their main responsibility to maintain communication with the client in order to mutually set goals. Interactions between nurses, providers, and family members also involve communication. As a result, nurses should be able to communicate well and have the necessary skills to communicate effectively (Sieloff, 1991, p. 12).

Therefore, inappropriate information during the handover process may lead to adverse events for the client. Additionally, time constraints force nurses to rapidly share essential information, but the ways in which this information is communicated varies because what one nurse may regard as irrelevant may have a different interpretation by another nurse. Communicating information in a standardized format ensures consistency (Wheeler, 2015). There are several causes for miscommunication during handovers, including an unsupportive organizational culture, unaligned expectations, ineffective communication methods, out-of-sync timing, lack of time, interruptions, and unstandardized procedures (Streeter and Harrington, 2017).

2.3 Social system

King defined this system as an organized set of social roles, behaviors, and practices that maintain values and regulate practice and rules. Concepts of power, authority, decision-making, and organization were identified. Social systems include workplaces and health care. As part of the nursing process, nurses work with client groups and individuals within the social system to address health needs and social wants. Thus, it is important to focus on the goals of the social system that are being served when setting mutual goals, planning programs, and evaluating outcomes (Sieloff, 1991, p. 8).

All organizations having goals, and resources are utilized for goal achievement. For an organisation to be productive, it needs good decision-making policies. The system view of an institution emphasizes the design of communication, information inflow and opinions (Sieloff, 1991, p.15). A knowledge of the conception of institutions is essential for nurses working within social systems. To serve professionally and to achieve quality care norms, nurses must apply influence on an organization.

3. THE PURPOSE AND OBJECTIVES OF THE THESIS

Nursing shift reports facilitate clinical decisions, facilitate patient care planning, and provide a forum for nurse-patient interaction and problem-solving.
The purpose of this study is to explore factors that can influence nurse’s handover and its impact on the continuity of patient care and patient safety in hospital settings. This study helps to address the importance of intershift reports to maximize the efficiency of care that is delivered.

The objective of this study is to investigate the different forms and handover tools used by nurses during handover in the hospital setting.
To understand barriers and challenges to an effective handover and how it can affect the continuity of care. The importance of handover in nursing and how to improve the handover process.

Research question
How nurse's handover process impacts the continuity of patient care in a hospital setting?

4. METHODOLOGY

In this thesis writing methodology helps in gathering necessary data that facilitates answering of our research questions and aims. In this chapter we are going to present the method, data collection process, list of articles chosen for the study and content analysis. This study is a qualitative literature review. Literature reviews synthesize research findings to show evidence on a meta level and to identify areas where more research is needed, which is key to creating theoretical frameworks and building conceptual model (Synder, 2019). This study uses thematic analysis by Braun & Clarke (2006) for data analysis.

4.1 Data collection

For the data retrieval process 3 search engines and variety of key words related to the research question were used. The databases include CINAHL, SCIENCE DIRECT, PROQUEST health research premium collection. The CINAHL database contains the most comprehensive collection of full-text nursing and allied health journals. ProQuest has a collection of nursing and allied health databases, while science direct is a health science collection which consists of nursing and health professionals' databases. The key words used were in Boolean phrase, Nurses handover OR nurse's handoff OR nurses inter-shift reports AND continuity of patient care AND patient safety. The inclusion and exclusion criteria can be seen in table 1.

Inclusion criteria	**Exclusion criteria**
Articles with the key words Nurses handover OR nurses handoff OR nurses inter-shift report AND continuity of patient care AND patient safety.	Articles that dealt with other matter not related to handover process and nursing.
Articles in English	Articles in other languages
Articles from 2014 till date	Articles older than 2014
Peer reviewed articles, research articles, scholarly journals abstract and full text and free full text	Articles not freely available and preprints Literature review articles

Table 1. Inclusion and exclusion criteria

Searching from the CINAHL database after putting in the key words gave 400 hits. After applying the inclusion and exclusion criteria had 59 hits. 25 articles were further selected based on their titles and abstract. 14 articles were finally selected after reading the abstract and rapid view of the full articles which had relevance to our research question.

ProQuest data yielded 1148 hits after using the key words in the advanced search. Inclusion and exclusion criteria further gave 207 hits. 21 articles were then further selected by titles and after reading the abstract, 9 articles were finally selected.

The science direct data base had 5146 hits after using of the keywords for searching. After the inclusion and exclusion criteria, a total 148 articles were retrieved. A total of 15 articles were further selected based on their title and abstract and finally 9 articles selected which had relevance to the study.
A total of 30 articles were selected from all the data bases for this literature review. Articles were checked for credibility and relevance (see fig.1)

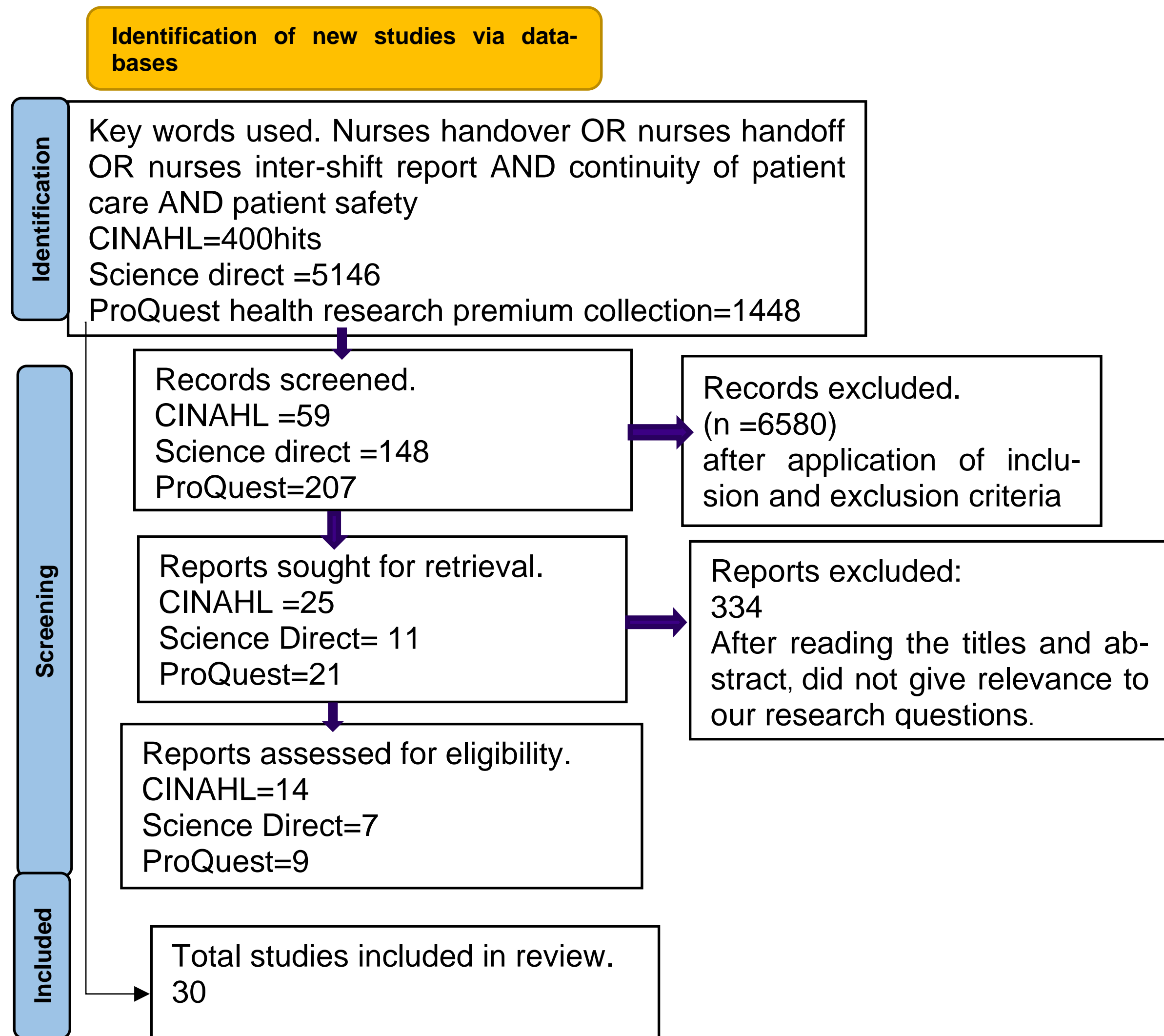

Fig 1 Prisma flow chart for data retrieval process

List of articles selected

A total of 30 articles were selected at the final phase of data retrieval process. A table of the summary of the selected articles was created which includes title of article, the authors (alphabetical order), year of publication and journal, methodology and results. (See appendix one for the summary)

4.2 Data analysis

The data analysis method for this literature is the thematic analysis by Braun and Clarke (2006). Thematic analysis was defined by Braun and Clarke (2006) as a method for systematically identifying, organizing, and offering insight into patterns of meaning (themes) across a data set. According to Braun and Clarke there are six phases to the thematic analysis process. This method is also supported by Terry et al. (2017). The six steps include familiarization of the data, creating codes, constructing themes, reviewing themes, defining, and naming themes and writing the report.

Familiarisation of data begins during the collection of data, and it provides an entry into the analysis. It's the researcher's first opportunity for what is referred to as immersion on the data set. And it's about intimately knowing the data and familiarizing oneself to it (Terry et al., 2017). In this study, all the textual data was read, and side notes and observational notes were made. During familiarisation of the selected 30 articles, major concepts were outlined and summarized from literature. This process of summarizing is done hand in hand with the research question to see if it answers it.

After the familiarisation the next step is to begin creating codes. The codes provide labelling features for the data that are potentially relevant to the research question (Braun and Clarke 2012, p. 61). Coding involves identifying relevant data within each data item and tagging them with a few words. Data coding is essential for understanding the data, developing insights, and providing a solid base for analysis as well as modifying the research question (Terry et al., 2017 p. 24,26). To make coding easy, the identified data was highlighted with different colours. After coding, we put all the items together and compiled a list of codes with patterns and relevant meaning.

The process of searching for themes involves analysing the codes created and sorting them into potential themes and combining the relevant codes into a specific theme (Braun and Clarke, 2006 p.19).
These themes represent a pattern of response or meaning of data in relation to the research question, as explained by Braun and Clarke (2012, p. 63). During this process, the data and codes are examined, then combined into cluster or collapsing codes into a bigger picture after which the themes are developed.

The purpose of defining chosen themes is to determine what they are about and whether they answer the research question (Braun and Clarke 2006, p. 22; Terry et al., 2017 p. 30). This is an important part of the thematic process, by excluding the themes that are not relevant to the research question, the themes were shaped.

In defining and naming themes, it is important to clearly state what makes them unique and specific and be able to summarize their essence in a few sentences (Braun and Clarke 2012, p. 66). By identifying what makes each theme unique and specific, it is important to define the themes. A good, detailed analysis of each theme and its relationship to the overall data story was conducted and written. The theme name needs to give a clear indication of the content of the team and draw the reader to the analysis (Terry et al., 2017).

During this phase, we conducted a final analysis of the data collected. As part of the analysis, the data should be presented in a concise, coherent, logical, and non-repetitive manner alongside the themes that define the data (Braun and Clarke, 2006, p. 23).

5. RESULTS

The chapter will explain the results from our findings. The research question "How nurses handover impacts the continuity of patient care in hospital setting?" aided in bringing out relevant data for the results. This project is aimed to reveal what articles say about the factors that improve the quality of nurse's handover as well as the factors that cause barriers to continuity of care and patient safety.
Through the thematic analysis of 30 articles four main themes emerged such as institutional system and guidelines, quality of handover process, barriers to handover process, and patient safety (see table 2). The institutional system guidelines had a subtheme of structure and standardization and quality of handover had subtheme of effective communication, barriers had a subtheme of interruption and patient safety had subtheme of risk factors. These themes and subthemes were formed to analyze the research question.

In the study, the institutional system, and guidelines, such as the use of structured and standardized handover tools, were found to be key to improving nurse's handover quality. Handoff communications were also identified from numerous articles as the best practice for a successful handover. On the other hand, barriers such as interruptions, workload, and risk to patient safety such as loss of relevant information were revealed in numerous articles as key factors that affect the handover process.

Theme	Institutional system and guideline	Quality of handover	Barrier to handover process	Patient safety
Sub-theme	Structure and standardisation of handover	Effective communication	Interruptions	Risk factors
Codes	Structured and standardised handover using ISBAR, NEWS2, ISBARQ and ISoBAR tool.	Effective transfer of patient information and responsibility	Time	Loss of relevant patient information
	Nurse's Educational levels and experience	Structured information and improved patient care	Work overload and overtime	Lack of structure and standardization of the handover process.
	Improved learning opportunity	Improved verbal communication and documentation amongst staffs	Noisy and chaotic handover	Poor transfer and communication of patient information
		Patient centred care		Low compliance of nurses to bedside handover
Unit of analysis	1,3,4,6,8,10,11,12, 13,14,15,16,17,18,19 ,21,22,24,26,28	1,2,3,6,7,8,10,11, 12,13,15,16,17,19,20,21 ,22,24,25,28,29	1,2,3,4,5,6,7,9, 13,14,18,20,27, 28,30	3,4,5,9,11,14,18, 23,24,26,27,30

Table 2. Themes and codes used in data analysis.

5.1 Institutional system and guidelines

This theme gives insight of the results on how the institutions structure their handover, provides learning opportunities and a good environment for the nurses. The subtheme of the institutional guidelines was the structure and standardisation of the handover. The subheadings below give factors that can improve or have a negative impact on the handover process following the institution's policies or guidelines.

Most handovers from the articles were structured and standardized with the use of ISBAR, ISoBAR, ISBARQ AND NEWS2. The ISBAR was the most used tool during the handover as seen from the results.

Structured and standardized handover

According to one of the participants, using ISBAR between the intensive care unit and general wards is beneficial because it helps to get a complete picture of the patient's condition, as well as help to plan further treatment, mobilization, and medication (8). The communication tool ISBAR was seen as a pocket card during each handover, and the CRNA followed the important items (12). An ISBAR mnemonic was used by the TLs for structuring their handovers. In more than half of the handovers, the patient's diagnosis, reason for admission to the ICU, and surgical procedure were included (26).

Also, the news2 score was used in a ward and was found to improve quality of handover. NEWS2 is used to record vital signs and documentation of clinical information. The use of NEWS2 to assess patient condition ensures clear communication and better understanding of information. As a result, patient handover and teamwork are improved (10). Each focus group mentioned the significant practice in the use of iSoBAR from surgical point of view, looking at the patient´s wound from the beginning of the shift, there is not always chance to view the wound at the end of the shift. But when handing over at the same time of viewing the wound, it gives the real picture of the wound. (1)

According to the nurses in this study, a structured handoff indicates what is most important, what action is needed, and when questions are appropriate. This structured approach guides handoffs by providing cues about its progress, especially at the end. Several participants mentioned the importance of a systematic and organized approach to handoffs (19). It was considered essential to have structure in handovers because a lack of structure could lead to crucial information being omitted (15).

Nurses' Educational levels and experience

Nurses who have been trained in bedside handovers provided complete information about the patient's condition in 100% of the videotaped handovers. On the other hand, nurses without this training provided partial information in 62% of handovers, while nurses with this training gave complete information in 38%. (24) During this study healthcare assistants were partially or entirely excluded from the bedside handover process, which poses a risk: 'One of the nurses neglected to tell me what was going on, such as which patients were going home or coming in' (3).Based on the results of this study, nurses with a bachelor's degree or greater had significantly higher scores than nurses with only a junior high or lower education, and the gap between them was significant (28)

A staff member's level of experience and specialization determines the importance and knowledge of the information that is passed on, which can result in inconsistency in the information conveyed (18). Nurses' personal preferences are also influenced by their level of experience. Nurses could easily recognize peers whose approaches and preferences differed from their own. An individual's preferences regarding handoff content and structure may pose a threat to a successful handoff. (19)

Improved learning opportunity

Everyone involved in the handover process learned from one another's knowledge and experience, and they saw it as a learning opportunity (15).
As a result of the study, the findings indicated that the protocol on SBAR technique of handoff helped to improve the knowledge and practice of handoff amongst the experimental group of nursing staff (22).
In the context of bedside handovers, demonstrating the professionalism of the staff was seen as a means of demonstrating staff competence and knowledge, as well as educating the patient about their care (1).

Despite nurses' willingness to be individually responsible for patients, they feel restricted by their colleagues, which leads to centralized handovers. As a result, these colleagues felt more comfortable participating in a collective nursing team since they could pass tasks for which they were not proficient (16).
Reporting handover was perceived positively by TLs as they felt comfortable asking questions, the information was accurate and timely, and it contained sufficient information (26).

5.2 Quality of handover

In this theme the results from the articles were centred on communication, structured information, nurses experiences, teamwork, patient centred care and transfer of responsibility of care during handover. All these influences good quality of nurses handover.

Effective transfer of patient information and responsibility

The SAFE tool was implemented to be used by nurses in this study and the results showed that it was more effective at transferring information, comprehensive, and accurate. Additionally, the SAFE handover tool was noted as an effective method of identifying relevant patients and for providing situational awareness (7). According to 87.5% of nurses who completed the survey, they handed over a patient's care plan, treatment (drug treatment, medication allergies, etc.), as well as disease information (diagnosis, symptoms, vital signs, etc.) during clinical handovers (13).
Regardless of the clinical context or number of nursing staff involved, the ISBARQ protocol ensured that information was effectively transferred at the time of handover (17). This study also found that nurses shared very valuable information during handovers. Nurses expressed satisfaction with the amount and quality of information shared, with most reporting that they felt well-informed about the patient's care plan (2).

Nurses who responded to the survey provided a large majority of responses for the positive aspects of clinical handover to patients, with most answering that "provides easy access to information about the patient", "simplifies the follow-up of patient information", "simplifies the acquisition of information about the patient and the disease", "provides the opportunity for me to find out information about the patient and their illness", "prevents medical errors " and "improves communication between nurses" (13) .Participants reported that taking over responsibility was facilitated by reducing communication channels, since the persons responsible for the patient had direct communication with the people taking over responsibility. (15). Another study found that outgoing nurses informed incoming nurses of discrepancies between their own subjective experiences and assessments and information in patient records (11). In addition to ensuring the oncoming nurse had adequate information, questions and comments enabled the sender to confirm the recipient was actively attending to the information (20).

Structured information and improved patient care

During the structured handover process, the perioperative team presented and discussed critical information regarding the infant's health status and the operative plan to be followed (6). Several nurses who participated in this project acknowledged that the ISBAR tool had simplified the process of proposing treatment options for patients. Additionally, they recognized the importance of working with physicians to plan future treatment (8).

As a result of the reorganization initiatives, there was a noticeable change in patient flow and arrival in the PACU. Recovery patients were no longer forced to wait in line for a turn among nurses. Patients were assigned to their respective PACU rooms each morning by the PACU nurses so that each nurse knew which patients she was responsible for caring for (12). According to this finding, having the opportunity to ask questions and receive updated information during handover had a positive indirect correlation with the quality of handover, as the patient's condition and care plan could be better understood by using questions and receiving updated information (17).

This study illustrates some important findings about patient handover practices, their effectiveness, possibilities, and challenges relevant to vulnerable populations, with the aim of improving patient safety (6).
In 32% of patients, the management of their case was changed because of recovering information that was found in the ICU (information rescue). A greater change was noticed in clinical management among patients with information discrepancies than among those without discrepancies (30).

Improved verbal communication and documentation amongst staffs

As a result of using the ISBAR tool, the participants had a better understanding of how structuring communication is important. Using ISBAR tool was reported to be necessary to reduce mistakes in the treatment of patients caused by misunderstandings or unclear communication (8). Furthermore, nurses were able to communicate sensitive information regarding psychosocial issues so that uncertainties could be resolved (11). Nurses use the Patient Handover Documentation Tool for Staff Nurses to communicate the patient's needs and information about the patient in a safe and effective manner. This tool enabled nurses to maintain a high standard of care and improve quality of care for patients (25).

ISoBAR was used when comprehensive communication was needed to improve patient outcomes and minimize human error (1). According to this study, NEWS2 facilitated clear communication and understanding of patient information, provided an opportunity for cross-checking, and improved the quality of patient handovers (10). Communication was improved when handovers took place in a quiet room without interruptions and all parties focused on talking to each other (15).
Nurses who participated in both verbal and written handovers were more likely to respond positively to the statement "increased communication between nurses" (13).
A lack of stress was described as an important prerequisite to good communication between staff, and some participants adjusted their communication based on the experience of other staff involved in the handover (15).

In this study, the mean number of technical errors per handover decreased from 5.42 to 3.15 after implementing the new handover protocol, while the mean number of information handover omissions decreased from 2.09 to 1.07 after the new handover protocol was implemented (22). Most importantly, NEWS2 was most effective in improving the quality of handovers, teamwork, and safety culture. Using NEWS2 improved the quality of handovers, enhanced teamwork, and improved safety culture. Additionally, nurses were able to provide better documentation of their patients' condition than they had previously (10).

Patient centered care

Engaging patients in care processes based on their preferences can be beneficial to individualizing care and improving hospital safety (29). Involving the patient in bedside handovers has been shown to improve practice outcomes, since patients understand their care pathway and are able to visualize their own needs. Furthermore, it shows them (patient) that we communicate and are equally interested in what they are experiencing (1). For patients, the most important thing was to be invited to participate in the handover of their care, and to be asked questions, as well as to speak up and hear what was said. (29).

5.3 Barriers to handover process

This theme gave insight to barriers of an effective handover through interruptions such as work overload, time, noise, and language barriers from patients.

Work overload and overtime

Whenever the number of patients per nurse increases (i.e., the nursing workload increases), the likelihood of staff reporting sufficient time for staff development and education decreases by 4%. There was a 9% reduction of staff discussing patient care, a 5% reduction in reporting assignments that enhance continuity, and a 3% increase in reports of loss of relevant information during shift changes (4).

Due to only a 30-minute overlap in shifts and the fact that handovers seldom begin promptly, it is quite common for most shifts to finish late due to the short overlap of shifts. Typically, nurses are working overtime to complete handovers after a 12-hour shift, which can be a problem at the end of one of the busier shifts (3).

A significant correlation was found between working overtime and poorer outcomes in the study: nurses reported fewer opportunities to attend continuing education programs, less opportunities to discuss patient care information with others, fewer patient care assignments that foster continuity of care, and losing patient care information during shift changes. (4). Ultimately, the handover process at the receiving PICU was perceived as stressful since the healthcare professionals were often responsible for other patients at the same time. Patient safety risks were attributed to stress (9).

Noisy and chaotic handover

The handover was described as chaotic and noisy, with an unclear leadership and poor communication skills. This 'chaos' resulted in increased stress and resentment toward other unit members, which led to clinical information being lost. When information is lost, the risk of harm to patients, including preventable death, increases (30). Environmental noise from both nurses involved and nurses not directly involved in handover can be disruptive, especially if many nurses are present during the handover (27).

As a result of too many people, different times, or rosters, and phone ringing, nurses are interrupted when handing over patients. Handoff gets interrupted frequently by outsider's visits and phone calls, etc. (2,14). In this investigation, it was confirmed that most handovers occur at nurses' stations, which were often chaotic, with interruptions from people passing by (5).

Patient and family members' questions during handovers were sometimes considered inappropriate and unrelated to the handover content. Being distracted by unrelated questions from family members or patients disrupts the handover process. (27) . Additionally, nurses may not be able to answer questions from patients and relatives during clinical handover due to increased workloads (13). Patients who speak other languages have communication problems. A total of 95.2% of respondents used appropriate expressions since they believed negative language would have a negative impact on the patients or their families (13).

Time

As a result, the SAFE Handover Tool requires frequent updates, making it a time-consuming tool. There was a need for frequent updates to the SAFE Handover Tool, which resulted in a time-consuming process. Additionally, if the tool was not updated, its information may not be up to date, may be inaccurate, and may be prone to errors consequently (7).
Most nurses reported interruptions to the flow of information, which resulted in greater concerns about time constraints. The length of the handover increases when the patient and family are involved in every aspect of it (27). The most frequently expressed negative aspects of clinical handover were "clinical handover takes so much time" (24.4%) and "increases workload" (14.4%) (13). Considering the large number of patients whose handovers need to be planned and carried out, the results show that handover time is quite short (5).

5.4 Patient safety

The theme patient safety explains how the handover process if not well conducted could lead to loss of significant information and thereby cause harm to the patient. A subtheme of risk factors to patient safety developed a better picture of the problems associated with it.

Loss of relevant patient information

Most participants reported that the tool contained irrelevant information (e.g., dialysis stops and starts), was difficult to navigate and locate relevant information, and had missing content because items did not populate automatically (26). In 12 cases (24%), the ICU admission record did not contain clinical information from the trauma team leader's note. About 24% of patients had injuries that were not transmitted by handoff (30).

According to participants, handover variations result in significant loss of objective and subjective information. In addition to increasing patient harm, this loss may result in preventable deaths as well (11,30). Additionally, this study found a potential risk associated with drug reports. More than half of the nurses reported observing errors in drug concentrations, infusion rates, or missed drug reports. There was recognition that reading written reports on drugs was difficult, whether handwritten or electronic reports. It is difficult to maintain an overview of the situation when there is too much unsorted information and poorly structured written information. In many cases, information is readily available, but it takes too long to gather it in an understandable format (9).

Lack of structure and standardization of the hand over process

One of the negative aspects of the handover process in this study has been the lack of structure or standardization (7). Neither ward had any written guidelines for handovers or any common practice regarding handovers (3). It has been reported during this study that 77.4% of small and medium-sized hospitals did not have written guidelines or checklists about handovers (14).
As a result, we identified poor organization on the part of the nurses during handovers. A lack of a structured process, along with not having enough time to prepare and discuss handovers, may affect the quality of the information presented. (5). According to the researcher, clinical information handover lacks formal structure, requiring standardization to be effective (30). NICU providers reported how a poorly structured handover resulted in a fatal outcome for 37% of patients and OR providers reported a fatal outcome for 18% of patients (6).

Poor transfer and communication of patient information

The data transfer from OR to PICU was unreliable due to the current implementation of the handover tool. Several user errors contributed to the failure of the handover tool (18). According to the study, there were factors that indicated that the receiving healthcare professionals weren't always informed of when or whether the child would arrive at the facility. In addition to the child's arrival at the PICU being a risky moment, different types of reports were being done simultaneously without any structure (9). The healthcare professionals at the receiving hospital sensed that the medical retrieval team was only concerned with providing information about the transport (9).

There may be instances when the incoming nurse knew the outgoing nurse's patients from previous shifts and could provide additional information about their condition and future care needs that could affect the outgoing nurse's report (11).

Low compliance of nurses to bedside handover

Nurses have explained that nurses are unwilling and unmotivated to carry out bedside handovers. These nurses have explained that nurses don't always co-operate with bedside handovers. Occasionally, nurses want to handover at the nurse's station, not at the bedside of the patient. Due to confidentiality concerns, nurses in this study felt uncomfortable involving receivers, hindering patient and family participation (27).

A bedside handover did not always occur at the bedside, but outside the room if the patient was in a single room. In some cases, staff chose to hand over in the middle or outside the bay with multiple beds (3).

6. ETHICAL PERSPECTIVE AND RELIABILITY

This study is a qualitative literature review on nurses' handover and continuity of patient care. According to Pope and Mays (2020), ethical principles underpin the legal work and regulations that govern research. In carrying out this study the ethical principle of following institutional and governmental policy was taken into consideration. We followed the Diakonia institutional guidelines for thesis writing and templates which is the Community Based Participatory Research (CBPR) guide 2.0 (2020). The thesis guide stipulates the standard and guidelines for writing scientific research and it can be accessed through Diak libguide. Respect for intellectual property rights was duly followed. Proper citation and referencing of authors and data used. This avoids plagiarism and gives credit to who is due.

During qualitative research, there is a risk of unsafe data being collected. Using reliable databases, CINAHL, Science Direct, and ProQuest health research premium collection, we selected the data for the review. We maintain detailed records of our research process and carefully examine our work.

The 2012 (TENK) guidelines regarding responsible research conduct and handling alleged violations of conduct were considered. As part of the data acquisition, research, and evaluation process, guidelines were followed that adhered to scientific criteria and ethical sustainability, as well as respecting the work and achievements of other researchers by citing their publications correctly, respecting their work, and giving them the credit and weight, they deserve.

7. DISCUSSION

The impact of communication during handover in healthcare settings is well recognized in the results chapter of this literature. According to, Imogene King´s goal attainment theory, specifically focused on phenomena called "process and outcome". This theory explains how communication is important between nurses and their patients to achieve a set goal (Snowden et al., 2010). Additionally, the theory emphasizes the importance of information in client care, treatment, and recovery. Through communication, care givers and recipients of care can establish a mutually beneficial relationship, which facilitates nursing care. From our studies it could be seen how effective communication between nurse staff was important as relevant information concerning the patient's care was being communicated, also efficient transfer of responsibility of the patients. Nurses have the primary responsibility to maintain open communication with the client to mutually set goals. Nurses also communicate with other nurses, providers, and family members. Thus, nurses must be able to communicate effectively and have good communication skills (Sieloff, 1991, p.12).

Handover communication failures are now widely recognized as a major cause of critical incidents. There is a significant proportion of patient complaints related to them (Eggins et al., 2016, p. 6). Furthermore, during the sentinel alert event, the joint commission (2017) mentioned gaps in communication during hand-off processes, thus increasing patient safety risks. Our study identified how poor communication was a risk to patient safety as crucial and pertinent information regarding the patients was not transmitted.

The risk to patient safety identified in our findings includes loss of relevant information, lack of structures and standardization, poor transfer, and communication. Relating to these, handover communications is a vital intervention tool often prone to errors which could pose risk to the safety of the patient and continuity of care. Because of these reasons, improving the handover process has become a priority (Raeisi et al., 2019). Consequently, The Joint Commission (2017) recommended standardized and structured forms to ensure patient safety and continuity of care.

A major theme in the findings was the institutional system and guidelines. Most of the handover in the wards had a structured and standardized tool. It’s the ability of the organization to create principal guidelines such as structured and standardized handover tools, restructuring the time of handover, creating a conducive environment for handover, avoiding, or reducing workload for nurses. As a result, continuity of care and patient safety will be negatively impacted by a lack of structured organization. According to Randell et al., 2011, there is evidence that a lack of protected time for handover and many patients to hand over are organizational factors that affect the handover process negatively.

It’s the responsibility of the organization to develop standardized tools and provide good structures for the handover process so that the nurse can attain the goal of improving patient health and reducing adverse events. As such, standardized tools such as SBAR, has provided good structures and guidelines for nurses during the handover process. As seen in the findings, this tool has improved verbal communication among nurses thereby reducing loss of patient relevant information. In relation to nurses as individuals during the handover process, perceives information about clients through a structured tool, for example ISBAR from where the nurse can track patient information during the period of care. If the information is perceived positively then the goal of maintaining the health of the client is achieved. The way information is passed on is key to ensuring that the process is efficient and effective. A clear and structured approach should be taken to ensure that the right information is being transferred and understood by all.

In addition, the provision of learning opportunities for nurses such as training is also important. In the findings, it was seen in one of the studies that educational levels of nurses affected handover evaluation. Nurses trained in bedside handovers gave 100% full information about the patient's current condition. In contrast, nurses without this training provided incomplete information in 38% of cases.

Not only are the tools of handover important, the method of handover is also significant during the handover process. Bedside handover is characterized by involving the patient as a participant in their own care. It enables patients access to their medical and nursing care information (Alrajhi et al., 2013). The findings found that bedside handover improves patient centered care. The bedside handover has promoted both patient and family engagement in the care process, which also promotes patient outcome and continuity of care.

The concepts of communication, interaction, and transaction play an important role in handover. The nursing handover process involves communication between nurse to nurse and clients during bedside reporting. The nurse interacts at all levels during the care process both with other health personnel and health clients, and after all this process has occurred then a transaction has occurred through documentation. Documentation in nursing is a vital tool during the handover process. In previous studies, it has also been found that documentation of native language nurses can also be lacking (Johannesen et al., 2019). The Finnish Model of Standardized Nursing Documentation was developed for national use as part of the Finnish EHR project, which is based on the WHO nursing documentation model. Public and private EHR systems in Finland have implemented the national standardized nursing documentation model. In all cases, it is recommended to document in accordance with the national standardized nursing documentation model (Häyrinen et al., 2010).

Another key point from the findings is the barriers to the handover process. Nurses have expressed their concerns about interruptions being the major factors disrupting the handover process. Interruptions such as noisy and chaotic environment, phone ringing and most especially if too many nurses were present during handover. Thus, these factors are said to impact patient safety and continuity of care negatively. These findings can be linked with the concept of Vanderzwan et al., 2023, that Interruption in handover have been observed, it was said that findings from study of interruptions in nurse´s work has demonstrated serious implications on continuity of care and patient safety.

On the other hand, nurses also reported that time constraints had been a great interference disrupting the flow of information. In one of the findings, 24.4% of nurses expressed concerns that clinical handover takes so much time, and the time devoted to handover is limited. According to Watson et al., 2014, “time” is a key factor affecting all types of nurse’s handover. In this study time was seen a limiting factor to the handover process as there was either little time for the hand-over making the nurses not reporting or passing inadequate information about continuity of care.

The handover communication between nurses in hospital settings will remain a crucial aspect of patient safety and continuity of care. According to this study, the quality of handover can be improved if the institutional system and guidelines can be reformed. Therefore, this study builds evidence that effective communication ensures good continuity of care, improve patient safety, and reduce adverse events.

7.1 Professional development

This thesis process has been a building stone for professional development. Skills have been developed and new ones acquired. It has molded us to be good team leaders and to be able to work successfully in a team. We learnt how to systematically carry out qualitative research and do a literature review. During this process we also learnt how to carefully cite articles and give relevance to who is due to avoid plagiarism. One of the most important skills developed was how to analyze articles and bring out the results.

In a nutshell our thesis work process has given us a better understanding of the handover process in nursing and how we are going to implement it in our working life as nursing professionals to ensure good quality handover which has a positive outcome on continuity of patient care and patient safety.

8. CONCLUSION AND RECOMMENDATION

Nurses' handover has been demonstrated as an important component of client care and continuity of care. It has been seen that nurses were able to have ideas on all what shift reports were all about as they carry out the handover process daily. The most common handover tool used amongst nurses was the ISBAR, which helped especially as it improved communication amongst nurses. Concerning the methods used in handing over, nurses used bedside and written, and verbal at nursing unit. Nurses had knowledge on the gaps found within reports as reported often there were loss of relevant patient information because of poor communication. Furthermore, they also indicated that they face problems such as time constraint, noise etc. during the process of handing over.

In a nutshell, every attempt should be made to enhance nurses' effectiveness and efficiency in the process of handover. The key strategy to achieving this is through effective management of the process of shift report. The latter has the potential to generate positive outcomes for clients, thereby improving patient safety.

On basis of this research, the following measures can be recommended to improve on the process of handing over:
A standard format and guidelines should be introduced in all institutions for the process of inter-shift report. The reporter should always make sure to read and check back the report to ensure errors are limited. All information concerning patients should be documented, especially new complaints lodged. Allocate time for report writing and handover process and all forms of distractions such as televisions should be removed from the nursing stations and avoid phone calls and noise during the time of handing over. The nurse- patient relationship should be improved, so that communication can be enhanced. This can be done through emphasis on bedside nursing. Training should be offered to nurses in the form of fresher courses and seminars to improve their knowledge.

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APPENDIX 1

Table of summary of 30 articles

Title of article	Author and year	journal	Methodology	Results
1.A collaborative approach to the implementation of a structured clinical handover tool (iSoBAR), within a hospital setting in metropolitan Western Australian	Beament et al., (2018)	*Nurse Education in Practice,vol 33*, 107-113	A mixed methods study. A quantitative, descriptive survey design, using pre and post survey data before and after the implementation of an education intervention was used. Twenty-nine nurses, doctors and allied health personnel employed at the study site participated in the study.	The use of an interprofessional educational program increased the confidence and understanding of a range of health care practitioners when using the clinical handover tool iSoBAR. Confidence in using the tool also increased post educational intervention from 2.7 (pre-intervention) to 4.07 (post-intervention). Focus groups identified several factors relating to the implementation of iSoBAR, creating two dominant themes: challenges concerning patient factors and change management processes and systems. Opportunities were identified: Practice enhancement, patient centred care, professional practice, and grassroots initiatives
2. Nursing clinical handover in neonatal care.	Brown & Sims, (2014).	*A Journal for the Australian Nursing Profession, 49*(1), 50-59	An exploratory, descriptive, prospective quantitative survey with qualitative elements was undertaken using The Handover Evaluation Scale (O'Connell, MacDonald, & Kelly, 2008). All nurses working in the Neonatal unit who attend afternoon handover, were invited to participate in the study	The quantitative and qualitative results indicate that the quality of the information handed over in neonatal care units can be maintained despite intrinsic limitations. Additionally, high levels of support and interaction between nursing staff in this stressful practice environment

			(N = 22), with N = 16 responses received	occur during the handover period. Participants in this study reported the staggered shift start times contributed to the inefficiencies related to handover. Nurses and other health professionals often use particular methods to select and transfer patient information, such as SBAR, ISBAR and iSHAPED.
3. Nurse handover: patient and staff experiences	Bruton et al., (2016).	*British Journal of Nursing*, *25*(7), 386–393.	A qualitative and observational study on two acute wards in a large urban hospital in the UK	Nurses worked beyond their shift end to complete handover. Communication problems within the clinical team were identified by staff and patients. Teams need to agree their model of handover and develop the structure, content, and style accordingly. The use of existing mnemonics or tools could be considered.
4. Are long shifts, overtime and staffing levels associated with nurses' opportunity for educational activities, communication and continuity of care assignments?	Emmanuel et al., (2020).	*International Journal of Nursing Studies Advances*, *2*, 100002.	A cross-sectional study. Cross-sectional survey of 2990 registered nurses in 48 hospitals in England. Relationships were estimated through generalised linear mixed models	When compared to working overtime, nurses working only scheduled hours reported more opportunities these activities (OR=1.31, 95% CI [1.07, 1.61] and OR=2.06, 95% CI [1.72, 2.47] respectively), and reported fewer cases of losing care information during handovers (OR=0.72, 95% CI

				[0.60, 0.86]). Furthermore, with each additional patient per nurse (i.e., higher workloads), poorer outcomes for all variables of interest were observed Working overtime and lower staffing levels also similarly associated with decreased opportunities for these activities, in addition to increasing the likelihood of reporting that important care information is lost during handovers and reporting fewer care assignments that foster continuity of care.
5. A tool for assessing the quality of nursing handovers	Ferrara et al., (2017.	*British Journal of Nursing*, *26*(15), 882–888.	A validation studies The scale was translated from English into Italian and the content validity index was calculated and internal consistency assessed. The scale was used in several units of the San Paolo Teaching Hospital in Milan, Italy	The study's results show that the time devoted to handover is quite limited, owing to the large number of patients whose handovers must be planned and given. This investigation confirms that most handovers take place in the nurses' stations, which are often chaotic, with interruptions and people coming and going. This study has provided the Italian nursing community with a tool that can help evaluate handovers; further work is needed to confirm how useful the Handoff CEX scale is helping to build safer care environments

6. Impact of patient handover structure on neonatal perioperative safety	France et al., (2019).	*Journal of Perinatology, 39*(3), 453-467.	A prospective observational study and one-time cross-sectional provider survey were conducted at one urban academic children's hospital. 130 non-cardiac surgical cases in 109 neonates who received pre- and post-operative NICU care.	OR-to-NICU handovers achieved an effectiveness rating ≥ 3 (5: most effective) indicating that all critical content related to the infant's health status and operative plan was presented and discussed by the perioperative team during the structured handover. NICU nurses are dissatisfied with the timing (or lack) of communications about an imminent handover from the OR or PACU. The timing of handovers is driven by the OR schedule and thus fit with the anesthesia provider's workflow however they create a disruption to the workflow of all other providers.
7. Implementation of a SAFE OB Handover for CRNAs	Gabot, (2022).	*AANA Journal*, *90*(1), 17–24.	A mixed methodology was used to operationalize handover quality This study implemented the SAFE Handover Tool for Certified Registered Nurse Anesthetists (CRNAs) in a Level III (Subspecialty) Maternal Care unit.	The SAFE Handover Tool improved the quality of CRNA communication and enabled situational awareness. A modified SAFE Handover Tool was subsequently integrated into the obstetrical anesthesia electronic charting system. unstructured, verbal, obstetrical anesthesia handovers have led to information omission, which harms patients or delays care. This study filled a knowledge gap by implementing the SAFE

				Handover Tool, while also using mixed methodology to operationalize nurse anesthetist assessment of handover quality. Descriptive, statistical, and content analyses demonstrated significant improvements in obstetrical handover quality after the SAFE Handover Tool was used..
8. Experiences of using the ISBAR tool after an intervention	Haddeland et al., (2022)	*Intensive & Critical Care Nursing, 70*, 103195.	A focus group study among critical care nurses and anaesthesiologists	This study has identified that the use of the ISBAR tool can provide nurses and anaesthesiologists with a sense of predictability and security. This was identified through increased awareness of communication and professional roles. The study participants perceived that interprofessional teamwork improved when the ISBAR tool was used. The findings highlight the importance and need in clinical practice for use of the ISBAR tool to improve patient safety.
9. Challenges in the handover process of the newborn with congenital heart disease	Hansson et al.,(2020)	*Intensive & Critical Care Nursing, 59*	A cross-sectional questionnaire study with 53 receiving healthcare professionals at a paediatric intensive care unit at a tertiary referral university hospital in Sweden.	The handover process of the new-born with heart disease transferred to a tertiary referral hospital is complicated. A clear majority of the respondents identified one or more flaws in this process. Crucial factors identified were

				relevant and structured information, clear communication, adequate patient knowledge and an enabling environment. The respondents stated a need for relevant information, which included a correct and complete verbal and written report provided in a timely manner before the patient was transferred to the receiving hospital.
10. Using an Early Warning Score for Nurse Shift Patient Handover	Hwang & Kim. (2022).	*Asian Nursing Research, 16*(1), 18-24	Before-and-after Study conducted with nurses and patients in three general wards in a tertiary teaching hospital.	This study demonstrated that using NEWS2 to prioritize patients at high risk for deterioration in nursing intershift communication improved the socio-cultural factors of handover quality, teamwork, and safety climate in the wards. In addition, it led to increased nursing documentation of patient conditions. Nursing documentation of vital signs and clinical concerns increased after the use of NEWS2
11. Lost in translation - Silent reporting and electronic patient records in nursing handovers	Ihlebæk, (2020)	*International Journal of Nursing Studies, 109*, 1	An ethnographic study : Ethnographic fieldwork was conducted in a Norwegian hospital cancer ward where computer mediated handover referred to as ’silent reporting’ had been implemented.	The main aim of this study was to enhance understanding of the implication of electronic patient records on clinicians’ cognitive work by exploring how nurses engage with the record when silent reporting is

				implemented in shift handovers Silent reporting has implications for nurses' cognitive work and professional knowledge. With the sole reliance on the electronic patient record as handover tools, it is not only information essential to nurses' evolving, dynamic, and contextualised understanding of the patient's situation that is lost in translation, but also the visibility and legitimacy of nursing knowledge. Thus, although silent reporting did not silence the nurses, the lack of formal structures to ensure fruitful interplay between oral and written accounts represents a threat to nurses' cognitive work as a collective achievement and to the usefulness of electronic patient records as a mediator of knowledge about patients.
12. ISBAR as a Structured Tool for Patient Handover During Postoperative Recovery	Kaltoft et al., (2022.	*Journal of Peri-Anesthesia Nursing*, *37*(1), 34-39	A prospective quality improvement project with pre/post assessment The project took place at a Danish Hospital with cancer surgeries and elective surgeries of five surgical specialties	The content of the oral handover was more structured using the ISBAR, and handovers became more concentrated and undisturbed (from 12% to 86%). At baseline, certified registered nurse anaesthetists were more satisfied with the handover than

				RNs (38% difference). At the follow-up, there was no discrepancy between the two groups. The ISBAR structured approach reduced disturbances to handover because everybody involved had a clear expectation of the different items to be reviewed and were less likely to interrupt to question or clarify. Using ISBAR as a structured tool along with organizational changes can improve the quality of patient handover and thereby improve patient safety.
13. The Approaches and Attitudes of Nurses on Clinical Handover.	Kilic et al., (2017)	*International Journal of Caring Sciences*, *10*(1), 136–145.	Descriptive and cross sectional, conducted between April and July 2013 in seven institutions located in a city of Turkey. The sample group consisted of a total of 480 nurses. A personal information form and a questionnaire on clinical handover were used in this study	In this study, the positive aspects of clinical handover mostly indicated by the nurses were as follows; "Simplifies the follow-up of patient information", "Simplifies the acquisition of information about the patient and the disease" and "Gives an opportunity to get information that I did not know or did not understand" (respectively 80.2%, 74.2%, 67.7%). The negative aspects of clinical handover mostly specified by the nurses were as follows; "Clinical handover takes too much time" (24.4%) and "increases work load" (14.4%).

14. Patient safety culture and handoff evaluation of nurses in small and medium-sized hospitals.	Kim et al. (2021).	*International journal of nursing sciences*, *8*(1), 58-64.	A descriptive study. 425 nurses who work at small and medium-sized hospitals in South Korea were included in our study. They completed a set of self-reporting questionnaires that evaluated demographic data, handoff-related characteristics, perception of patient safety culture, and handoff evaluation.	Study conducted to provide an overview of the status of handoffs and to identify factors that make a difference in handoff evaluation in small and medium sized hospital. Most nurses experienced errors in handoff and most nurses had no guidelines and checklist in the ward. Handoff evaluation differed significantly according to the level of education, work patterns, duration of hospital employment, handoff method, degree of satisfaction with the current handoff method, errors occurring at the time of handoff, handoff guidelines, and appropriateness of handoff education time.
15. The critical care nurse's perception of handover	Linn & Anderzén - Carlsson (2020)	*Intensive & Critical Care Nursing, 58*	phenomenographic study using individual interviews for data-collection. The critical care nurses participating in the study were recruited from critical care units in three hospitals in Sweden	Five descriptive categories were identified: Communication between staff, Opportunity for learning, Patient-centred information gathering as a basis for continuous care, Responsibility for transfers, and Patient safety and quality of care. Critical care nurses have various perceptions of handover, yet the majority spontaneously identified the verbal report as the handover.

16. Barriers and Facilitators for the Use of NURSING Bedside Handovers: Implications for Evidence-Based Practice.	Malfait et al., (2019).	*Worldviews on Evidence-Based Nursing*, *16*(4), 289–298.	Structured individual interviews (N = 106) on 14 nursing wards in eight hospitals were performed before implementation of bedside handovers.	The aim of this study was to determine whether there was an association between the nursing care system on a ward and the barriers and facilitators for bedside handover. Twelve barriers and facilitators were identified, of which three are new to literature: the possible loss of opportunities for socializing, collegiality, and overview; head nurse's role; and role of colleagues. The extent to which barriers and facilitators were present differed across nursing care systems, except for breach of confidentiality (barrier), and an existing structured handover (facilitator).
17. Factors associated with nurses' perceptions, their communication skills and the quality of clinical handover in the Hong Kong context	Pun, (2021).	*BMC Nursing*, *20*(1), 1–8.	A questionnaire survey was conducted immediately after the nurses' training in effective handover communication. A convenience sample of 206 bilingual nursing staff from a local hospital in Hong Kong participated in this paper-and-pencil survey adopted from the Nurses Handover Perceptions Questionnaire survey	Clinical nursing handover was a routine yet pivotal, high-risk communicative event in hospital. Nurses' formal shift-end handovers occurred at least three times a day, excluding the in-between breaks or patient transfer. Nurses who had updated information were likely to ask more questions and obtain a better understanding of the patient care plan during handover

18. Evaluation of a Paper-Based Checklist versus an Electronic Handover Tool Based on the Situation Background Assessment Recommendation (SBAR) Concept in Patients after Surgery for Congenital Heart Disease	Rehm et al. (2021)	*Journal of Clinical Medicine, 10*(24), 5724	Randomized observational study of 40 electronic vs. 40 paper checklist handovers after paediatric cardiac surgery, with a 48 items checklist for comparison of reporting frequencies and notification of disturbances and noise	Many handovers suffered a noisy and distracting atmosphere. There was no difference in staff satisfaction between the two handover approaches. Nurses were highly unsatisfied with the general approach by which the handover was performed. Our findings suggest that both methods, as currently implemented, are equivalent to each other, with the advantage of real-time data transfer favouring the electronic handover process regarding future prospective
19. Standardized Change-of-Shift Handoff: Nurses' Perspectives and Implications for Evidence-Based Practice	Rhudy et al. (2022)	*American Journal of Critical Care*, *31*(3), 181–188	A qualitative descriptive approach was used to conduct a secondary analysis of focus group data. Thirty-four nurses from 4 critical care units participated in focus groups.	Nurses in this study affirmed that systematic approaches to change-of-shift handoff are valuable and important to safe and effective information exchange. Three themes emerged: handoff elements are defined by practice and culture; a clear, consistent, identified structure supports handoff; and personal preferences can disrupt handoff
20. Change-of-Shift Nursing Handoff Interruptions: Implications for Evidence-Based Practice.	Rhudy et al., (2019).	*Worldviews on Evidence-Based Nursing*, *16*(5), 362–370	An exploratory descriptive design One hundred nurse-to-nurse handoffs were observed, and four	This exploratory descriptive study aimed to examine the frequency, type, and impact of interruptions during nurse to-nurse handoff. Most

			focus groups were conducted.	interruptions outside of the nurse handoff dyad came from patients and their families in the form of providing or asking for information. About half of the nurses reported that interruptions occurred during handoff. Focus group findings revealed that whether something is an interruption is determined by the individual nurse's appraisal of value added to their knowledge of the patient and/or plan of care at the time of handoff.
21. Impact of Structured Clinical Handover Protocol on Communication and Patient Satisfaction.	Sayani et al., (2021).	*Journal of Patient Experience1-6*	Single arm experimental trial A total of 2696 nursing handover processes, 52 patients, and 10 nurses were enrolled in the study using an observation checklist and a structured questionnaire.	In the present study, standardized SBAR nursing handover protocol implementation had a positive effect on bedside nursing handover. Compliance of SBAR and all other components of the standard nursing handover process were more appreciated in the postintervention group. patient satisfaction regarding nursing handover significantly improved after the implementation of a standardized protocol
22. Effectiveness of Protocol on Situation, Background, Assessment, Recommendation (SBAR)	Shalini et al., (2015).	*International Journal of Nursing Education*, *7*(1), 123–127	An evaluative approach was used. The study was conducted in a tertiary care hospital and consisted of 72 staff nurses and 72 handoff	The findings revealed that the protocol on SBAR technique of handoff helped to improve the knowledge and practice of handoff

Technique of Communication among Nurses During Patients' Handoff in a Tertiary Care Hospital.			events by same staff nurses with 36 in both experimental and control group	among experimental group of staff nurses. Results showed that the mean number of technical errors per handover reduced after the new handover protocol. This study concludes that the protocol on SBAR technique of communication during patients' handoff among nurses was effective.
23. Observations of nursing staff compliance to a checklist for person-centred handovers – a quality improvement project	Sharp et al., (2019).	*Scandinavian Journal of Caring Sciences*, *33*(4), 892–901.	Observational study. The quality improvement project at two wards at a large university hospital. Karolinska University Hospital	This evaluation (made shortly after the introduction of the PCH) shows that the nursing staffs' compliance to the handover checklist needs improvements and highlights the need for greater focus on communication-oriented tasks during handovers. More attention is needed on person-centred information exchange between the patients and nursing staff. The use of the PCH checklist contributes to a more standardised and comprehensive handover procedure in which nurses encourage both patients and their loved ones to take an active role
24. Benefits of Health Care Communication	Slade et al., (2018).	. *The Journal of Continuing Education in*	An Australian Hospital Case Study. Participatory approach.	Nurses who had received the specific training in bedside

Training for Nurses Conducting Bedside Handovers: An Australian Hospital Case Study.		*Nursing, 49*(7), 329-336.	Researchers recruited 26 nurses from a hospital in Canberra, Australia.	handovers interacted with their patients to a far greater extent, asked more questions, and stated more complete information about their patient's medical journey. Nurses with training in bedside handovers provided full information about the patient's current condition in 100% of the videotaped handovers. Nurses without this training gave complete information in just 38% of the handovers; the nurses without training provided partial information in the other 62% of handover The results of this research project show the need for specific bedside handover training for nurses.
25. Development of Patient Handover Documentation Tool for Staff Nurses using Modified Delphi Technique	Sodhi et al. (2015).	. *International Journal of Nursing Education*, *7*(2), 165–169	Instrument development design for Patient Handover Documentation Tool for Staff Nurses. 252 Items were generated from evidence and qualitative data	The study concluded that proper documentation during shift change plays an important and integral part for providing accurate and quality of care for the patient. Using Patient Handover Documentation Tool for Staff Nurses for communicating patient's needs and information improves nurses' safe practice in basic nursing care and improve the quality of patient handover.

26. Implementation of an Evidence-Based Practice Nursing Handover Tool in Intensive Care Using the Knowledge-to-Action Framework.	Spooner et al., (2018).	*Worldviews on Evidence-Based Nursing*, *15*(2), 88–96	Descriptive study This study was conducted in a 21-bed medical-surgical intensive care unit in Queensland, Australia.	Almost half of the participants, however, found the minimum data set contained irrelevant information, reported difficulties navigating and locating relevant information, and pertinent information was missing. Suggestions for improvement focused on modifications to the electronic handover interface. The KTA framework provided a structure to implement and evaluate an evidence-based eMDS for nursing TL shift-to-shift handover.
27. Nurses' Perceived Barriers to Bedside Handover and Their Implication for Clinical Practice.	Tobiano et al., (2017	*Worldviews on Evidence-Based Nursing*, *14*(5), 343–349.	A cross-sectional survey was administered to 200 nurses working on medical wards, recruited from two Australian hospitals.	Three categories were revealed from the open-ended responses, including censoring the message, disrupting the communication flow, and inhibiting characteristics. Barriers to bedside handover were determined to relate to individual nurse factors, patient factors, social, political and legal factors, and guideline factors. Our study showed nurses thought privacy issues, inefficient flow of communication, and individual patient and nurse characteristics frequently hindered bedside handover.

28. Correlation between the quality of nursing handover, job satisfaction, and group cohesion among psychiatric nurses	Wang et al. (2022).	*BMC Nursing, 21*, 1–7.	cross-sectional study. This correlational quantitative study was conducted in a tertiary psychiatric hospital in Shandong Province, China.	The findings of this study indicate that group cohesion and job satisfaction are positively related to the quality of psychiatric nursing handovers. The indirect effect of group cohesion on the quality of nursing handovers through job satisfaction accounted for 45.8% of the total effect, indicating that job satisfaction might play a more important role in improving the quality of nursing handovers.
29. Patient and nurse preferences for implementation of bedside handover: Do they agree?	Whitty et al., (2017)	*Health Expectations*, *20*(4), 742–750.	Discrete choice experiment describing handover choices using six characteristics whether the patient is invited to participate; whether a family member/carer/ friend is invited; the number of nurses present; the level of patient involvement; the information content; and privacy. Two Australian hospitals	All participants strongly support handover at the bedside and want patients to participate although patient and nurse preferences for various aspects of bedside handover differ. Engaging patients in care processes based on their preferences has the potential to individualize care. It also indicates strong support for inviting patients to actively engage in two-way information
30. Lost information during the handover of critically injured trauma patients	Zakrison et al. (2016)	*BMJ Quality & Safety, 25*(12), 929.	A mixed-methods study. level I trauma centre in Toronto, Canada	The study found that the transfer of critically injured trauma patients from the ED to the ICU was accompanied by a significant loss of important clinical information.